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Northern Novelties for 1919

1. Some New Fruits and a Rose

2. Some New Alfalfas and a Cereal

Department of Horticulture, South Dakota State College of Agriculture and Mechanic Arts
Brookings, South Dakota

First Edition March 22, 1919

Blight--the Greatest Enemy to the Pear

BREEDING PEARS IMMUNE TO BLIGHT

The experiments in breeding pears immune or resistant to blight are described in Bulletin 159 of this Station. In the spring of 1915 scions of 39 varieties were distributed to 24 men in four different states. The later developments of this work I noted in the Minnesota Horticulturist for August, 1916, and in the 13th report of the S. D. State Horticultural Society. Since the publication of Bulletin 159 the tree called **Pyrus sinensis** or **Pyrus Simonii** has been separated from the other Chinese pears by Alfred Rehder into a new species and is now called **Pyrus ovoidea**. The seasons since 1914 have been marked by the most severe invasion of blight in the history of the Station. No attempt was made to cut out the affected pear, apple and crab apple trees so these resistant pear seedlings have had every opportunity to blight standing as they are in the same row with the blighted trees.

These new hybrid pears have not fruited, but the fruit cannot be expected to be smaller than that of **Pyrus ovoidea** itself which, although only one and five-eighths inches in diameter, is sweet, juicy and of fair quality.

S. D. Usuri Pear

This is **Pyrus ussuriensis** from my own importation from Russia in the fall of 1907. We have attached the abbreviation S. D. for South Dakota so as to distinguish this importation from all others. They have proven practically immune to blight; of fine, vigorous upright habit, and very hardy, although standing in a crowded and unfavorable place.

Ussuriensis refers to the Usuri river in its native home on the Pacific coast section of eastern Siberia. The Usuri river starts due north of Vladivostok and runs a distance of about 400 miles north to the Amur river. Here this pear is native of vast forests of that region. **Pyrus ussuriensis** and its near relative **Pyrus ovoidea**, from north China, combine the necessary qualities of winter hardiness and blight resistance.

These trees should be carefully mulched over winter to prevent root-killing of the Japan pear seedling stocks upon which they are budded.

Gogol Pear

N. E. H. 26. Pedigree: Parrot Pear x Pyrus Ovoidea pear pollen. Two plants resulted from this combination. The Parrot pear we received from England. This one we selected and numbered N. E. H. 26 has been free from blight, except one small twig blighted in 1918. It was injured by rabbits in the winter of 1916-1917.

This seedling is named after Gogol, a Russian poet.

Tolstoy Pear

Pedigree: Clapp's Favorite pear x Pyrus Ovoidea pollen. This is a seedling of Clapp's Favorite pear crossed with pollen of Pyrus ovoidea. The original tree is a beautiful tree of strong upright growth. It has shown no blight up to date, even after the severe blight invasion from 1914 to 1918, inclusive. The tree has proven hardy so far showing that it must be a true hybrid. The tree has not fruited but the size of the fruit will no doubt be intermediate between that of the two parents. Clapp's Favorite is one of the largest and best of American pears. This was the only tree resulting from this hybridization. Introduced spring 1917 as N. E. H. 34; see S. D. Bulletin 159.

Pushkin Pear

Pedigree: Pyrus ovoidea x R&K 553 pear pollen. Seventy-one trees resulted from this cross. R&K 553 is a pear received under this number from Russia. Some of the seedlings have blighted, others not. One of the best appears to be the one we numbered N. E. H. 18. and now named after Pushkin, a Russian author.

Price of Pear Trees

Price of Pear trees, one year buds on Japan pear seedling stocks, each $1.00. None of these pear trees are available as Horticultural Society premiums.

None of our other hybrid pears are available for spring distribution simply because the Japan pear seedlings on which they were budded winter-killed. This definitely determines the fact that we must find a hardier stock than the common Japan pear seedlings, or the trees may be raised further south and then when planted at the North should be set deeply and carefully mulched each winter. Pyrus ussuriensis, the wild pear of the Pacific coast of Siberia bore a good crop 1917 and 1918, and we have saved every seed. This and Pyrus ovoidea will probably be the hardy blight-proof pear stocks for the North. I am endeavoring to secure a supply of this seed for raising stocks.

Beauty Crab

Offered for the first time. One of our seedlings of **Pyrus baccata cerasifera** raised from seed received from the Botanical Gardens at Petrograd, Russia. The name Beauty has been given to this seedling because it is perhaps the brightest in color of all our crab seedlings. It is a brilliant solid cherry, red all over with orange red underneath, especially on the shaded side. Size is about one and one-fourth inch in diameter. Dots distinct, few, white. Basin deep, irregular. Calyx deciduous with russet scar, and no opening into the core. Flesh white, firm, very juicy, acid. This is of the Cherry crab type. Tree is a very heavy bearer. It is of special promise owing to its tendency of late keeping. The fruit makes a bright red sauce like the Hyslop crab but the flesh has not the astringency of the Hyslop. We have kept the fruit into January in a rather warm cellar. Tree is a very stocky, and vigorous grower of wide and strong forks and strongly resistant to blight. This tree should be of special value at the far North as it may mean the beginning of the development of the Siberian crab as a late keeper.

Available stock 60 trees. One year buds on three year old **Pyrus baccata** stock. Trees each $1.00.

Olga Crab

Offered for the first time. Pedigree: Female parent, Duchess of Oldenburg apple. Male parent, **Pyrus baccata cerasifera**, which is much like the old Cherry crab. This combines the Russian apple with the Siberian crab. Fruit is regular, oblate, fully 1½ inch in diameter on the original seedling tree. Color solid bright cherry red all over with blue bloom; dots distinct, white, many large; basin quite shallow, smooth; cavity wide, obtuse with considerable russet. Calyx mostly deciduous. Flesh is yellowish white, crisp, juicy, acid, of good quality.

Flesh is yellow with red core outline. Very good to eat raw as it mellows. The fruit cooks up very quickly, as easily as the Duchess apple itself, and the sauce is of an attractive deep salmon red. Under propagation the trees may increase slightly in size of fruit. The tree is a vigorous stocky grower with strong forks and extremely productive.

Trees, one year buds on Yellow Siberian seedling stock, each 50c.

Izo Crab

Offered for the first time. Female parent Yellow Transparent apple. Male parent, Fluke No. 10, which is a seedling of Mercer Wild crab with some standard apple. This makes this pedigree one-half Russian apple, one-fourth West European apple and one-fourth wild crab from Mercer County, Illinois. Izo is the Sioux Indian word for peninsula. Regular, oblate. Yellow with bronze cheek. Russet dots and firm subacid flesh. The compact entire carpels of the core show influence of the wild crab. Flesh is clear acid. Appears promising as a crab that will keep well into winter.

Trees, 1 year buds on Red Siberian seedling stock, each 50 cents.

Caramel Apple

Offered for the first time. One of our seedlings from mixed seed of choice standard Northern apples. Fully medium size, two and three-fourths inch in diameter. Late yellow mostly covered with red stripes. Evidently of the Fameuse type. Flesh snow white, sweet, excellent. Of promise as a winter sweet apple of highest quality, but probably should go south rather than north. The name Caramel is given to it because it is a sweet apple.

Only one tree to a customer. Available stock, 14 trees, one year buds on Pyrus baccata stock. Each $1.00.

Sugar Crab

Offered for the first time. A large flavored winter sweet crab. One of our seedlings of Antonovka. Fruit 2 inches in diameter, round oblate, yellow with bronze blush. Flesh a rich sweet. This has fruited several times and has increased considerably in size since it first fruited. The fruit cooks up easily into a dark yellow sweet sauce that is very good. Tree has been free from blight so far. Its really excellent flavor should commend it to those who like sweet apples.

Trees, 1 year buds on Red Siberian seedling stock, each 50 cents.

Alexis Crab

Offered for the first time. Alexis is a Russian man's name. I have grown thousands of seedlings of Siberian crab apples, hoping to obtain varieties free from blight. The Alexis was raised from seed obtained from the Imperial Botanic Gardens at Petrograd, Russia. Fruit much like the Dolgo crab, long conical, polished, brilliant, dark solid cherry crab with attractive blue bloom. Flesh yellow, acid. Tree very productive, free from blight so far.

Trees, one year buds on Red Siberian crab seedlings, each 50 cents.

Cathay Crab

Offered for the first time. Cathay is the ancient name for China, referring to its native home. One of our seedlings of Pyrus ringo descended from the original importation from Russia by Professor J. L. Budd. The name as now given in Bailey's Cyclopedia of Horticulture is Pyrus prunifolia, Willd. var. Rinki. This seedling is a good representative of this species. Fruit, one and one-half inch in diameter; clear bright yellow all over with some orange blush. Calyx deciduous. Flesh clear, juicy, acid. Original tree has been very productive. The fruit cooks up as easily as Duchess making a light yellow acid sauce of good flavor. May be of value for ornamental purposes on the lawn as it is a dwarfish tree. Trees, one year buds on Yellow Siberian crab stock, each 50 cents.

Sasha Apple

Offered for the first time. Female parent, Hibernal; male parent, Gravenstein. Tree has not yet fruited, but is of strong, stocky growth. Blighted some in nursery the past season, but not more than some of the standard varieties. The pedigree indicates it should combine hardiness and quality. Sasha is a Russian man's name.

Trees, one year buds on Red Siberian crab stocks, each 50 cents.

Chance Apple

Offered for the first time. One of our chance seedlings from mixed seed of northern grown apples. Original tree productive. Fruit oblate, regular, of full commercial size, red striped all over with attractive blue bloom. Flesh white, pleasant subacid. Season probaby January or later. I hope this will help some on the late-keeping apple problem.

A few trees, one year buds on Pyrus baccata stocks, each 50 cents.

Red Tip Crab

Offered for the first time. Female parent, a wild crab from Elk River, Minnesota. Male parent, Pyrus Malus Niedzwetzkyana, a small red-fleshed apple from Turkestan in the high mountains between Turkestan and China. This tree has not fruited and the pedigree does not indicate any promise as a table fruit, but the red-tipped young leaves make it an interesting tree from the ornamental standpoint.

Trees, one year buds on Pyrus baccata stock, each 50 cents.

Dolgo Crab

A New Red-Jellied Siberian Crab

At the annual exhibits of this Department at the South Dakota State Fair many have asked about the remarkably long, conical, intensely bright red crabs we used for making letters. This is one I brought over from my second trip to Russia in 1897. A vigorous productive tree and so far free from blight. Fruit full of juice, jells easily, makes a rich ruby red jelly of beautiful color and excellent flavor.

The one year old trees in nursery are of strong growth with wide spreading forks and strongly shouldered limbs, indicating that they will not split down easily.

Trees one year buds on Red Siberian crab apple roots, each 50 cents.

Amur Crab

Introduced spring 1912. One of our seedlings of the select Siberian crabs known as Pyrus baccata cerasifera. The bright red color of the Amur crab makes it desirable for culinary use. Size of fruit one and one and one-half inches in diameter. The tree has been free from blight and the upright habit of the tree and the bright glowing color of the abundant fruit makes the tree very pleasing from the ornamental standpoint, even should the fruit be ranked too small to compete with the larger crabs. A few trees available for spring, one year buds on Gould hybrid crab apple stock, each 50 cents.

Ivan Crab

Offered for the first time spring 1916. One of our many seedling crabs. Noteworthy for the calyx segments being absent in the ripe fruit, the same as in the pure Siberian crab (Pyrus baccata). Fully one and three-fourths inch in diameter, roundish, oblate, good color, marbled with stripes and orange red, acid.

Trees one year buds on Red Siberian crab roots. Each 50 cents.

Progress With American Wild Crabs

Giant Wild Crab

Offered for first time spring 1917. Probably the largest wild crab found so far. Good specimens of the fruit run three inches in diameter and weigh four ounces. A brief note by W. H. Shroyer, of Sherrard, Illinois, calling attention to a large fruited wild crab, appeared in the Fruit Grower (St. Joseph, Mo., November, 1911, page 32). The article was illustrated with a cut of a specimen of the fruit. Early in December, 1911, I visited the original tree near Sherrard, Illinois, and obtained scions. The original tree was cut down in clearing out the brush some time in the winter of 1912-13, so it is fortunate that these scions were saved. As near as I could determine, the original tree of the Mercer (Fluke) wild crab was within about four miles of this

place, but it had been grubbed out of the open pasture of native timber where it was found. In color and quality the fruit of the Giant is much like the other large wild crabs, such as Soulard and Mercer, and will be useful mainly for jelly, or for adding a quince-like flavor to common apple sauce.

Trees, one year old budded on Siberian crab (Pyrus baccata) apple roots. Each 50 cents.

Missouri Wild Crab

Found many years ago somewhere in Missouri by the late Col. J. C. Evans of Kansas City, Missouri. This fruit was named and introduced by Col. Evans but I find no record of just where in Missouri it was found. Fruit roundish, two and one-half inches in diameter, truncated, regular, rich golden yellow all over. Its native acerbity is considerable toned down but still it is a wid crab. Worthty of preservation as a curiosity and perhaps as a basis for further work.

Trees, one year od on Red Siberian stock, each 50 cents.

Mercer Wild Crab

Found growing wild near Sherrard, Mercer County, Illinois, by the late N. K. Fluke of Davenport, Iowa. Fruit yellow, oblate, and up to two and five-eighths inches in diameter. Weight three ounces. This tree has been especially productive here at this station when top-grafted on Hibernal apple. Flavor acid and acerb, so it is useful mainly for jelly or for adding a quince-like flavor to apple sauce.

Trees, one year old on Pyrus baccata stock, each 50 cents.

Apples on Crab Apple Roots

Root-killing of the common apple stocks is now one great source of failure in apple culture in the prairie Northwest. It is time that definite experiments were conducted over a wide area with standard varieties of apples grown on the Siberian crab roote. Such trees will be free from root-killing, will attain less size and bear earlier. We have one year budded trees of Scott's Winter, Red Warrior, Milwaukee, Anisim, Salome, Duchess, Hibernal, Wealthy and Yellow Sweet apples and Estalline, Sweet Russet, Whitney, and Gideon No. 25 crab apples and other standard varieties. Also some new varieties, including Ivan crab, Dolgo crab, and Giant Wild crab. We wish to put these in the hands of careful people who will plant them, give good care and keep careful records. My impression of preliminary tests here at this station is that such trees may be planted close together and will no doubt be easier to spray.

SPECIAL OFFER—Trees 50 cents each, $5.00 per dozen. 25 of these trees will be sent as a free premium with a life membership in the South Dakota State Horticultural Society, or two with an annnual membership.

The Hansen Hybrid Plums

Originated in this Department, they are now represented in a million trees in western orchards and nurseries. They are rapidly finding favor in many other states. My sand cherry hybrids such as Opata, Sapa, Sansoto, Cheresoto, and Wachampa should be kept in bush form with many stems close to the ground. As they bear heavily on one year old wood, try to have an abundance of this wood coming on by pruning back the shoots that have borne several years. The Sand cherry hybrids should not be trimmed up with a high stem as some practice with ordinary plums.

The Waneta is the largest of all the Hansen Hybrid plums, It is a 2 inch, 2 ounce plum and of very strong growth in nursery. It is a cross of the America, a large Japanese plum, with pollen of the Terry. For spring we have only a few trees of the Waneta, one year buds on native plum roots, each $1.00.

Tetonkaha Rose

Offered for first time in the spring of 1912. A seedling of the wild prairie rose from Lake Tetonkaha, about eighteen miles northwest of this station, crossed with the pollen of a hybrid of Rosa rugosa, so that it is a combination of at least three species. In the 100 seedlings obtained from the cross, 74 were double and 26 single; all deep pink and fragrant. The stock offered consists of root sprouts from these 26 original double flowered seedlings. The flowers are fully three inches in diameter; the bush is perfectly hardy, flowering abundantly in June; about 18 to 25 petals, deep rich pink; very fragrant; appears desirable for dwarf hedges or as an ornamental shrub. The habit is more upright and the flowers are less concealed by the foliage than in the pure Rosa rugosa. This Tetonkaha rose proves absolutely hardy and very desirable in many places. It is a very free bloomer. Plants of strong growth and as they sprout freely it should not be necessary to propagate on tender commercial stocks or from cuttings.

Plants, 50 cents each.

Rosa Rugosa

The well known beautiful hardy rose with dark crimson single flowers up to four inches in diameter. Attractive ornamental in autumn and early winter with large bright red fruits, which are used, with seeds removed, for food in its native home. Our own importation, descended from the original introduction from Siberia by the Imperial Botanical Gardens, at Petrograd, Russia. The Siberian form of this species is superior to the Japanese form.

Strong plants, each 50c.

Sand Cherry Seedlings

Western Sand Cherry, **Prunus Besseyi.** A native of the highest and driest lands west of the Missouri river in this state. A dwarf bush fruit much favored by the Sioux Indians. These plants are seedlings of our third and later generations under cultivation at the South Dakota Experiment Station, hence many of the bushes bear fruit of extra size and fruit of all the seedlings is good enough for sauce.

Price, 10 one year seedlings for $1.00.

Proso

Proso is a good crop for slacker land, by which I mean low land that dries off too late for corn or any other crop. Proso is a grain millet (**Panicum miliaceum**) found in many colors and varieties in the dry regions of Asia. The grain ripens in 60 days. It may be cut for hay also but the grain crop is the main item. In my bulletin 158 the following were noted as some of the leading varieties: Early Fortune, Manitoba, Black Voronezh, Red Russian, Tambov, Red Lump and Red Orenburg. In my five trips to Russia I have brought over some 32 varieties of Proso.

In the spring of 1917 I published several articles on this subject which were widely disseminated and caused considerable increase in the acreage. In time of war any color of Proso will do but the tendency will be as soon as possible to plant the best white-seeded variety because this color adapts it better for human food according to our present standards. If an occasional white seed escapes the huller, it does not show when used as a breakfast cereal, or in bread.

The exact quantity to sow per acre is not yet standardized; it depends on conditions. On old land full of weed seed, early and thin sowing may be over-topped somewhat by pig weeds, causing difficulty in cutting. Some farmers sow as much as one-half bushel per acre, sowing as shallow as possible, broadcast or with press drill. Destroy all the weeds possible by frequent harrowing until time of sowing. Rather thin seeding will give the largest, plumpest grain. Sow shallow on a firm seed bed, as free as possible from weeds. Some believe that 20 pounds per acre is sufficiently heavy seeding. In 1914 we sowed 5 pounds per acre and harvested 22 bushels. The seed weighs up to 60 pounds per bushel. In this vicinity it has been grown on blue grass pasture broken up and seeded at the rate of one-half bushel seed per acre as late as the 13th of July. Under these conditions a Brookings county farmer in 1914 raised a crop of nearly 43 bushels per acre.

Experience the present season indicates that in an emergency the amount of wheat called for in some of the recipes in bulletin 158 of this station may be reduced so that three-fourths instead of one-third of the wheat flour can be saved. In a number of recipes the wheat can be omitted entirely. We hope to have something ready, for publication soon on this important subject.

Since the grain needs only 60 days, further south it may be raised successfully after winter wheat is harvested, thus raising two grain crops in one season. Here at Brookings, in the garden of the Department of Horticulture, in 1917 we sowed it as late as July 24 and it got ripe. The main difference was that it grew only knee-high instead of waist-high as usual. Ordinarily the first half of June will probably be preferred. It does not start until the ground is warm. Every available foot of land left in the home garden after early vegetables are removed may be sown to Proso. The seed may be sown broadcast or in narrow rows and cultivated with a wheel hoe. Many

millions of people in the dry parts of Asia and eastern Europe live on Proso as a main staple. In the 1890 famine in Russia, Proso bread saved the people from starvation.

Hulling Proso

In August, 1917, the first Proso huller in America was received by the South Dakota State College from Russia. I ordered it from Russia but owing to the submarine campaign it had to be sent via Siberia and Japan, so it was one year and seven months on the way. This machine was exhibited at the South Dakota State Fair at Huron, September, 1917. If necessary this machine may easily be duplicated, as it is not elaborately constructed as seen by the cuts, shown in our Spring, 1918, list. Meanwhile, for home use you can get along without the huller by using an old coffee mill or small hand grist-mill. In such cases the grain may be cleaned by sifting and pouring on a sheet in a current of air.

Hansen's White Siberian Proso

I found this large white-seeded grain millet among the Kirghiz Tartars near Semipalatinsk, Siberia, in 1913, who grew it extenseively as a grain for themselves and their live stock. It is the corner stone of their agriculture in this eight inch rainfall climate, a sure crop in the driest years. For table recipes, see bulletin 158 of this station. A minister in Wyoming writes that the ladies of his parish tried with good results eight of these recipes, including pancakes, muffins, sour milk bread, griddle cakes, rolls and Boston brown bread. Farmers in western South Dakota have raised 300 to 310 pounds of grain from one pound of seed. A grain that will furnish good nutritious food for yourself and family and all your live stock in the driest years on the driest uplands of all our western states. A grain that at a pinch can be prepared for the table with a cheap coffee mill and sieve. The past four seasons we have grown a small lot from hand-picked seed, the aim being to eliminate for table use the few grains of other colors mixed with the original stock as it came from Siberia. This is a very slow and tedious work. If you don't believe this, try it. One pound of seed sown in the spring means usually four to five bushels in the fall.

One pound seed of Hansen's White Siberian Proso, grown from seed hand-picked four years in succession. Price 50 cents.

Cossack Alfalfa

1916 CROP, 1,000 BUSHELS SEED

The strongest and best one of these hybrid alfalfas is the one I have named Cossack, noted in bulletins 159 and 167. The Cherno Alfalfa, sister plant of the Cossack, has been consolidated with the Cossack as it is not possible to distinguish between them. The small spoonful of seed which I brought home from Russia in 1906 and named Cossack has been developed in the hands of many farmers so that the 1916 crop in the western part of South Dakota was fully One Thousand bushels. In 1917 the crop of seed was reduced by crickets and grasshoppers. Buyers for the leading seedsmen have been busy in these fields and the seed is now being offered. Many farmers have found by their own experience that Cossack is the heaviest and best seeder of any alfalfa they have ever tested. Seedsmen are ready to handle many car loads more as soon as available. The dry seasons of 1911, 1912, 1913, demonstrated the value of Cossack. Very favorable reports of the Cossack come from many sections, including the far northwest prairie region of Saskatchewan, Canada. We have only a few pounds of Cossack seed available for the special experimenters who wish to get their start from the original stock. Price, one-half pound for $1.00.

ALFALFA PLANTS

Owing to scarcity of labor and land we did not get to sow any seed, so we have no alfalfa plants to offer for spring.

Hansen's Hybrid Alfalfa No. 1

This variety was produced by transplanting the Semipalatinsk alternately with my Select Turkestan S. P. I. 20711. The latter is characterized by wonderfully tall erect habit of growth. The seed was saved of the Semipalatinsk plants and instead of producing yellow flowers, I find that the work of hybridizing is practically finished as fully 86 per cent of the plants come strongly variegated in many colors. Only 14 per cent come with yellow flowers, which is the normal color of the Semipalatinsk. This original seed was sown in 1915 at the rate of 4 pounds per acre in 18-inch drills which we found was much too thick. The crop of 1916 was 7,200 pounds of hay on 1.4 acres in one cutting. The yield was really heavier but the frequent rains prevented getting all the crop. Owing to lack of room it is deemed best to offer seed to experimenters elsewhere. Price of seed, one ounce for 50 cents.

Semipalatinsk Alfalfa

Described in bulletin 141 and 167. From the dry steppes of Semipalatinsk, Siberia. Some of the farmers who have had excellent results with this alfalfa on the driest uplands of the west now abbreviate this word to Semi. A variety of great vigor and especially adapted to transplanting into cultivated rows. It is not at its best the first season as it first makes its remarkable root system. It does its own subsoiling on hardpan. Flowers yellow. I find this to be the strongest in growth of all the varieties of Medicago falcata. Seed, one-half pound for $1.00.

This variety shells its seed through a long season, which is Nature's way of securing a stand in its native country with only eight inches total annual rainfall. To improve the seeding habit from the standpoint of raising seed, let the plants stand uncut and select seed from the plants that hold their seed the longest. Some will hold the seed until frost.

Terms

Cash with order. Add 25 cents for moss and packing for orders less than $3.00. This money helps to pay for field labor and enables this Department to carry on the work of Plant Breeding on a larger scale than would otherwise be possible.

PROF. N. E. HANSEN,
State College, Brookings, South Dakota.

Special Offer---Double Value for Your Money

LIST OF FREE PREMIUMS

Offered by the South Dakota State Horticultural Society Until April 15, 1919

The Legislature has made this Society the Department of Horticulture for South Dakota and has fixed the price of annual membership at $1.00. The reports are published by the state, but aside from the State Official list, the report is sent only to members. This provides a fund to help pay the running expenses of the Society.

The Society wishes to increase its membership.

As a free premium, select One Dollar's worth of seeds, plants or trees from the foregoing list. The order must be received before April 15, 1919. As the supply of some of these premiums is very limited mark your second choice. One of the annual reports will be sent you at once. One book and one free premium amounting to One Dollar, will be sent postpaid for each $1.00 received. Here is a good chance to get a valuable library of books on South Dakota trees, fruit and gardening.

BOOK PREMIUMS

In place of seed and plant premiums, the following are offered. But the offer may be withdrawn at any time without notice, so hurry up your order:

Select ONE of the following list for each annual membership:

No. 1.—1 back volume of the Annual Report of this society.

No. 2.—Vegetable Gardening, 246 pages, paper cover, by the late Prof. S. B. Green, University of Minnesota.

No. 3.—Popular Fruit Growing, 323 pages, paper cover, by the late S. B. Green.

No. 4.—Evergreens, "How I Grow Them," 95 pages ,paper cover, by C. S. Harrison, and "Windbreaks and Shelter Belts," 69 pages, paper cover, by the late Prof. S. B. Green.

SPECIAL OFFER UNTIL APRIL 15, 1919

The life membership is fixed by the Legislature at Ten Dollars. It is highly desirable that the Society has more life members as they are our permanent source of strength and influence. Residents of South Dakota who become life members may select Ten Dollars worth of trees, plants, seeds or other premiums from this circular as a free premium. This includes a set of the 12 annual reports now issued, as far as available, and one annual report as issued. All premiums sent by express at customer's expense.

Address, PROF. N. E. HANSEN,
Secretary South Dakota State Horticultural Society,
Brookings, South Dakota.